

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (currently amended) A method to select a captain control node from a plurality of ~~interconnected~~ control nodes, comprising the steps of:

supplying a plurality of host computers, wherein a different one of said plurality of control nodes is disposed in each of said plurality of host computers;

supplying a plurality of data storage and retrieval systems;

supplying a communication link interconnecting each of said plurality of host computers and each of said data storage and retrieval systems;

providing by each of said plurality of control nodes a first signal to each of the other control nodes;

receiving by each of said plurality of control nodes, a response signal from each of the other control nodes;

calculating by each of said plurality of control nodes individual response times for each of the other control nodes;

determining an aggregate response time for each of the plurality of interconnected control nodes;

determining whether to select a captain control node using said aggregate response times;

operative if the captain control node is selected using said aggregate response times:



determining ~~the~~ a minimum aggregate response time; and  
designating the control node having said minimum aggregate response time as the captain control node to coordinate the operations of said plurality of host computers.

2. (currently amended) The method of claim 1, further comprising the steps of:  
determining if two or more control nodes each have said minimum aggregate response time;

~~operative~~ if two or more control nodes each have said minimum aggregate response time, repeating the steps of claim 1.

3. (currently amended) The method of claim 1, further comprising the steps of:  
calculating by each of said plurality of control nodes a standard deviation for that control node's aggregate response time;

providing said standard deviation by each control node to each of the remaining ~~interconnected~~ control nodes.

4. (currently amended) The method of claim 3, further comprising the steps of:  
~~operative~~ if two or more control nodes each have the minimum aggregate response time, determining which of said two or more control nodes has ~~the~~ a smallest standard deviation;  
designating the control node having the minimum aggregate response time and the smallest standard deviation as the captain control node.

5. (currently amended) The method of claim 1, further comprising the steps of:  
~~operative~~ if the captain control node is not selected using said aggregate response times, providing a captain control node selection function;

determining a performance score for each of the plurality of ~~interconnected~~ control



nodes using said captain control node selection function;

designating a control node having ~~the~~ a minimum performance score as the captain control node.

6. (original) The method of claim 5, wherein said captain control node selection function comprises the equation:

$$\text{Performance Score} = a(\text{aggregate response time})^c + b(\text{standard deviation})^d$$

wherein a, b, c and d are positive constants.

7. Canceled.

8. Canceled.

9. Canceled.

10. (currently amended) An article of manufacture comprising a host computer comprising a control node, wherein said host computer is interconnected by a communication link with a plurality of other host computers each comprising a control node, and wherein said host computer is further interconnected by said communication link with a plurality of data storage and retrieval systems, said host computer ~~and~~ further comprising a computer useable medium having computer readable program code disposed therein to select a captain control node from a said plurality of ~~interconnected~~ control nodes, the computer readable program code comprising a series of computer readable program steps to effect:

providing a first signal to each of the other control nodes;

receiving a response signal from each of the other control nodes;

calculating individual response times for each of the other control nodes;

determining an aggregate response time for said article of manufacture;



receiving ~~an~~ aggregate response ~~time~~ times from each of the other control nodes;  
determining whether to select a captain control node using said aggregate response  
times;

operative if the captain control node is selected using said aggregate response times,  
determining the minimum aggregate response time;

operative if the captain control node is selected using said aggregate response times,  
designating ~~the~~ a control node having said minimum aggregate response time the captain  
control node to coordinate the operations of said plurality of host computers.

11. (currently amended) The article of manufacture of claim 10, said computer  
readable program code further comprising a series of computer readable program steps to  
effect:

determining if two or more control nodes each have said minimum aggregate response  
time;

~~operative~~ if two or more control nodes each have said minimum aggregate response  
time, repeating the steps of claim 10.

12. (currently amended) The article of manufacture of claim 10, said computer  
readable program code further comprising a series of computer readable program steps to  
effect:

calculating a standard deviation for said aggregate response time for said article of  
manufacture; and

receiving a standard ~~deviation~~ deviations from each of the ~~remaining other~~  
nodes.



13. (currently amended) The article of manufacture of claim 12, said computer readable program code further comprising a series of computer readable program steps to effect:

operative if two or more control nodes each have said minimum aggregate response time, determining which of said two or more control nodes has ~~the~~ a smallest standard deviation;

designating the control node having said minimum aggregate response time and the smallest standard deviation as the captain control node.

14. (currently amended) The article of manufacture of claim 10, said computer readable program code further comprising a series of computer readable program steps to effect:

operative if the captain control node is not selected using said aggregate response times, retrieving a captain control node selection function;

determining a performance score for each of the plurality of ~~interconnected~~ control nodes using said captain control node selection function;

designating a control node having ~~the~~ a minimum performance score as the captain control node.

15. (original) The article of manufacture of claim 14, wherein said captain control node selection function comprises the equation:

$$\text{Performance Score} = a(\text{aggregate response time})^c + b(\text{standard deviation})^d$$

wherein a, b, c and d are positive constants

16. Canceled.



17. Canceled.

18. Canceled.

19. (currently amended) A computer program product disposed in host computer comprising a computer readable medium and usable with a programmable computer processor, wherein said host computer is interconnected by a communication link with a plurality of other host computers each comprising a control node, and wherein said host computer is further interconnected by said communication link with a plurality of data storage and retrieval systems, said computer program product being useable having computer readable program code embodied therein to select a captain control node from a plurality of ~~interconnected~~ control nodes; ~~wherein said computer program product is disposed in a first control node~~, comprising:

- computer readable program code which causes said programmable computer processor to provide a first signal to each of the other control nodes;
- computer readable program code which causes said programmable computer processor to receive a response signal from each of the other control nodes;
- computer readable program code which causes said programmable computer processor to calculate individual response times for each of the other control nodes;
- computer readable program code which causes said programmable computer processor to determine an aggregate response time for said ~~first control node~~ host computer;
- computer readable program code which causes said programmable computer processor to receive an aggregate response ~~time~~ times from each of the remaining control nodes;
- computer readable program code which causes said programmable computer processor to determine whether to select a captain control node using said aggregate response times;



computer readable program code which, if the captain control node is selected using said aggregate response times, causes said programmable computer processor to determine the minimum aggregate response time; and

computer readable program code which, if the captain control node is selected using said aggregate response times, causes said programmable computer processor to designate the control node having ~~the~~ a minimum aggregate response time as ~~the~~ said captain control node to coordinate the operations of said plurality of host computers.

20. (original) The computer program product of claim 19, further comprising:

computer readable program code which causes said programmable computer processor to determine if two or more control nodes each have the minimum aggregate response time;

computer readable program code which, if two or more control nodes each have the minimum aggregate response time, causes said programmable computer processor to repeat the steps of claim 19.

21. (currently amended) The computer program product of claim 19, further comprising:

computer readable program code which causes said programmable computer processor to calculate a standard deviation for said aggregate response time for said ~~first control node~~ host computer;

computer readable program code which causes said programmable computer processor to receive a standard ~~deviation~~ deviations from each of the ~~remaining~~ other control nodes.

22. (currently amended) The computer program product of claim 21, further comprising:



computer readable program code which, if two or more control nodes each have ~~the~~ a minimum aggregate response time, causes said programmable computer processor to determine which of said two or more control nodes has ~~the~~ a lowest standard deviation;

computer readable program code which causes said programmable computer processor to designate the control node having the minimum aggregate response time and the lowest standard deviation as the captain control node.

23. (currently amended) The computer program product of claim 19, further comprising:

computer readable program code which, if the captain control node is not selected using said aggregate response times, causes said programmable computer processor to retrieve a pre-determined captain control node selection function;

computer readable program code which causes said programmable computer processor to determine a performance score for each of the plurality of ~~interconnected~~ control nodes using said captain control node selection function;

computer readable program code which causes said programmable computer processor to designate a control node having ~~the~~ a minimum performance score as the captain control node.

24. (original) The computer program product of claim 23, wherein said captain control node selection function comprises the equation:

$$\text{Performance Score} = a(\text{aggregate response time})^c + b(\text{standard deviation})^d$$

wherein a, b, c and d are positive constants.